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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,145	08/25/2003	Richard Harvey	063170.6608	3233
5073 7590 07/18/2011 BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980				
EXAMINER LEWIS, ALICIA M				
ART UNIT 2164		PAPER NUMBER		
NOTIFICATION DATE 07/18/2011		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com  
glenda.orrantia@bakerbotts.com

### Office Action Summary

**Application No.**

10/648,145

**Applicant(s)**

HARVEY ET AL.

**Examiner**

ALICIA LEWIS

**Art Unit**

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 May 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-7, 10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This office action is responsive to communication filed May 2, 2011. Claims 1 and 5 are currently amended and claims 4, 8, 9 and 11 are cancelled. Claims 1-3, 5-7, 10 and 12-20 remain pending in this application.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-3, 5-7, 10 and 12-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
3. Claims 1 and 5 recite using the computer system to make a first directory child object for storing a value associated with the repeating attribute. However, the specification also fails to describe this making step. The specification only describes representing repeating elements as child objects (paragraph 229-230 of the PG-PUB 2004/0205084), but does not actually support the step of making the child objects. Similarly, the specification fails to support creating a second directory child object as recited in claims 2 and 6.

4. Therefore, the specification fails to describe the limitation making a first (and second) directory child object for storing a first value associated with the repeating attribute. As such, this claimed limitation fails to comply with the written description requirement. Claims 2, 3, 6, 7, 10 and 12-20 are rejected as being dependent upon rejected base claims 1 and 5.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 5-7, 10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (hereinafter 'AAPA') in view of Lee et al. (US 2002/0169788 A1) ('Lee'), and further in view of Bentley, Tim et al., "Leveraging Directory Technology for Enterprise UDDI" ('Bentley').

With respect to claims 1 and 5, AAPA teaches a computer-implemented method for use in a web services system having complex UDDI object(s) (Figs. 2 and 13, page 1 lines 13-15, page 2 lines 25-32, page 3 lines 9-19), the method comprising:

providing a database (page 2, lines 14-15) for storing a UDDI sub-structure comprising a plurality of UDDI objects having a plurality of attributes (Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27), wherein the plurality of attributes comprise:

at least one unique attribute (*i.e. authorized name and business key*) that occurs only once (Figs. 13 and 14, page 3 lines 10 - 19, page 4 lines 21-27); and

a repeating attribute (*i.e. name*) that occurs more than once (Figs. 13 and 14, page 3 lines 10 - 19, page 4 lines 21-27);

using a computer system to move the at least one unique attribute (*i.e. authorized name and business key*) into at least one directory parent object (*i.e. business entity object*) (page 4 lines 14-17 *teaches UDDI objects may be directory objects*) within the first object class (page 2 lines 25-29) (*Although AAPA does not use the term "moving" a unique attribute into a directory parent object, AAPA teaches that a unique attribute is stored in the at least one directory parent object. In order for an attribute to be stored in a directory object it must be moved there.*);

a directory child object (page 2 lines 25--29);

a directory object for storing a value associated with the repeating attribute (Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27); and

storing, in the database, the value associated with the repeating attribute of the UDDI substructure in the directory object (Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27).

AAPA does not teach using a computer system in communication with the database to make a first child object for storing a value associated with the repeating attributes, the first child object also within the first object class; using a computer system to move at least one attribute such that the at least one parent object comprises only

unique attributes; or storing, in the database, the value associated with the repeating attribute in the first child object.

Lee teaches a system and method for automatic loading of an XML document defined by a document-type definition into a relational database including the generation of a relational schema (see abstract), in which he teaches: using a computer system in communication with the database to make a first child object for storing a value associated with the repeating attributes, the first child object also within the first object class (paragraphs 114 and 198);

using a computer system to move at least one attribute such that the at least one parent object comprises only unique attributes (paragraphs 197-198); and

storing, in the database, the value associated with the repeating attribute in the first child object (paragraph 198).

*Lee teaches that an item represents an object and that an attribute is a property of an item. He further teaches repeating (i.e. multiple value) attributes. For example, Lee teaches an item (object) E has a multiple-value (repeating) attribute A, and further that a new item (child object) E.A may be created for each A. The item (object) E has a one-to-many relationship with the new item E.A, and thus the new item E.A represents a child object of the item (object) E. Lee, further teaches that multiple-value (repeating) attribute A is removed from attributes of item (object) E, and thus the item (object) E has only unique attributes.*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified AAPA by the teaching of Lee to enable

multiple-value attributes to be represents as sets by converting multiple-value attributes into separate table (or objects) in order to access those values (Lee, paragraphs 197-198).

Further regarding claims 1 and 5, AAPA in view of Lee fails to teach mapping the plurality of UDDI objects to a plurality of X.500 Directory objects; or storing data in a X.500 Directory store.

Bentley teaches leveraging directory technology for enterprise UDDI (see abstract), in which he teaches mapping the plurality of UDDI objects to a plurality of X.500 Directory objects (page 5, column 2, 3<sup>rd</sup> paragraph); and storing data in a X.500 Directory store (page 5, column 2, 3<sup>rd</sup> paragraph).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified AAPA by the teaching of Bentley to solve implementation problems posed by UDDI using X.500 technology (Bentley, page 5, column 1, 6<sup>th</sup> paragraph).

With respect to claims 2 and 6, AAPA in view Lee and Bentley teaches using the processor to create a second directory child object for storing a second value associated with the repeating attribute, the second child object also within the first object class (Lee, paragraphs 197-198). *(Lee teaches that for each attribute, an item (object) E.A is created.)*

With respect to claims 3 and 7, AAPA in view Lee and Bentley teaches wherein the parent object is at least one of a business entity, business service, binding template and tmodel (AAPA, Figs. 13 and 14, page 2 lines 25-29, page 3 lines 1 - 19).

With respect to claims 10 and 12, AAPA in view of Lee and Bentley teaches wherein the first child object is a relationship object (Lee, paragraphs 197-198).

With respect to claims 13 and 17, AAPA in view of Lee and Bentley teaches further comprising creating a searchable index of the first value associated with the repeating attribute (Lee, paragraphs 37, 76 and 197-198). *(Lee teaches creating an index, and further creating separate tables for accessing multiple-value attributes.)*

With respect to claims 14 and 18, AAPA in view of Lee and Bentley teaches storing at least one unique attribute in the directory parent object (AAPA, Figs. 13 and 14, page 3 lines 1 - 19).

With respect to claims 15 and 19, AAPA in view of Lee and Bentley teaches wherein the directory parent object comprises a business entity and the at least one unique attribute comprises a business key (AAPA, Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27).



With respect to claims 16 and 20, AAPA in view of Lee and Bentley teaches wherein the first directory child object is selected from the group consisting of name, description, contact, discovery URL, keyed references and business services (AAPA, Figs. 13 and 14, page 3 lines 1 – 19, page 4 lines 21-27, page 2 lines 25-29).

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-3, 5-7, 10 and 12-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALICIA LEWIS whose telephone number is (571)272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia M Lewis/  
Primary Examiner, Art Unit 2164  
July 13, 2011